 AIR RESOURCES BOARD	VOLVO CAR CORPORATION	EXECUTIVE ORDER A-018-0140-1
		New Passenger Cars, Light-Duty Trucks and Medium-Duty Vehicles

Pursuant to the authority vested in the Air Resources Board by Health and Safety Code (HSC), Div. 26, Part 5, Chap. 2; and pursuant to the authority vested in the undersigned by HSC Sections 39515 & 39516 and Executive Order G-02-003;

IT IS ORDERED AND RESOLVED:

That the following exhaust and evaporative emission control systems produced by the manufacturer are certified as described below. Production vehicles shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	TEST GROUP	VEHICLE TYPE	EXHAUST EMISSION STANDARD CATEGORY	USEFUL LIFE (miles)		INTERMEDIATE IN-USE COMPLIANCE (* = N/A or full in-use; A/E = exh. / evap. intermediate in-use)		FUEL TYPE
2006	6VVXV02.5L2T	Passenger Car	"LEV II" Low Emission Vehicle (LEV II LEV)	EXH / ORVR	EVAP	EXH	EVAP	Gasoline
				120K	150K	A	E	
No.	ECS & SPECIAL FEATURES		EVAPORATIVE FAMILY (EVAF)		DISPLACEMENT (L)			
1	TWC, HAFS, HO2S, SFI, TC, CAC, OBD(F)		6VVXR0130EV4		2.4, 2.5			
*	*		6VVXR0130EV5					
*	*		*					
*	*		*					

See the Attachment for Vehicle Models, Evaporative Family, Engine Displacement, Emission Control Systems, Phase-In Standards, OBD Compliance, Emission Standards and Certification Levels, and Abbreviations.

BE IT FURTHER RESOLVED:

That the exhaust and the evaporative emission standards and the certification emission levels for the listed vehicles are as listed on the Attachment. Compliance with the 50° Fahrenheit testing requirement may have been met based on the manufacturer's submitted compliance plan in lieu of testing. Any debit in the manufacturer's "NMOG Fleet Average" (PC or LDT) or "Vehicle Equivalent Credit" (MDV) compliance plan shall be equalized as required.

BE IT FURTHER RESOLVED:

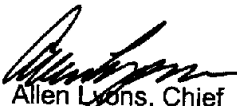
That for the listed vehicle models, the manufacturer has attested to compliance with Title 13, California Code of Regulations, (13 CCR) Sections 1965 [emission control labels], 1968.2 [on-board diagnostic, full or partial compliance], 2035 et seq. [emission control warranty], 2235 [fuel tank fill pipes and openings] (gasoline and alcohol fueled vehicles only), and "High-Altitude Requirements" and "Inspection and Maintenance Emission Standards" (California Exhaust Emission Standards and Test Procedures for 2001 and Subsequent Model PC, LDT and MDV).

Vehicles certified under this Executive Order shall conform to all applicable California emission regulations.

The Bureau of Automotive Repair will be notified by copy of this Executive Order.

This Executive Order hereby supersedes Executive Order A-018-0140 dated May 26, 2005.

Executed at El Monte, California on this 3RD day of November 2005.


 Allen Lyons, Chief
 Mobile Source Operations Division



ATTACHMENT

EXHAUST AND EVAPORATIVE EMISSION STANDARDS AND CERTIFICATION LEVELS

(For bi-, dual- or flexible-fueled vehicles, the STD and CERT in parentheses are those applicable to testing on gasoline test fuel.)

NMOG FLEET AVERAGE [g/ml]		NMOG @ RAF=* CH4 RAF = *		NMOG or NMHC STD [g/ml]	CH4=methane; NMOG=non-CH4 organic gas; NMHC=non-CH4 hydrocarbon; CO=carbon monoxide; NOx=oxides of nitrogen; HCHO=formaldehyde; PM=particulate matter; RAF=reactivity adjustment factor; 2/3 D [g/test]=2/3 day diurnal+hot-soak; RL [g/ml]=running loss; ORVR [g/gallon dispensed]=on-board refueling vapor recovery; g=gram; mg=milligram; mi=mile; K=1000 miles; F=degrees Fahrenheit; SFTP=supplemental federal test procedure										
CERT	STD	NMOG CERT [g/ml]	NMHC CERT [g/ml]		CO [g/ml]		NOx [g/ml]		HCHO [mg/ml]		PM [g/ml]		Hwy NOx [g/ml]		
0.036	0.046				CERT	STD	CERT	STD	CERT	STD	CERT	STD	CERT	STD	
	@ 50K	0.020	*	0.075	0.3	3.4	0.03	0.05	*	15.	*	*	0.004	0.07	
	@ UL	0.025	*	0.090	0.4	4.2	0.04	0.07	*	18.	*	*	0.01	0.09	
	@ 50°F & 4K	0.044	*	0.150	0.4	3.4	0.02	0.05	*	30.	*	*	*	*	
CO [g/ml] @ 20°F & 50K				NMHC+NOx [g/ml] (composite)		CO [g/ml] (composite)		NMHC+NOx [g/ml] [US06]		CO [g/ml] [US06]		NMHC+NOx [g/ml] [SC03]		CO [g/ml] [SC03]	
CERT	1.6	SFTP @ 4000 miles		*	*	*	*	0.04	0.14	2.7	8.0	0.01	0.20	0.1	2.7
STD	10.0	SFTP @ * miles		*	*	*	*	*	*	*	*	*	*	*	*
Evaporative Family		3-Days Diurnal + Hot Soak (grams/test) @ UL		2-Days Diurnal + Hot Soak (grams/test) @ UL		Running Loss (grams/mile) @ UL		On-Board Refueling Vapor Recovery (grams/gallon) @ UL							
		CERT	STD	CERT	STD	CERT	STD	CERT	STD						
6VVXR0130EV4		0.44	0.50	0.43	0.65	0.01	0.05	0.08	0.20						
6VVXR0130EV5		0.33	0.50	0.44	0.65	0.01	0.05	0.06	0.20						
*		*	*	*	*	*	*	*	*						
*		*	*	*	*	*	*	*	*						

* = not applicable; UL=useful life; PC=passenger car; LD=light duty truck

* = not applicable; UL=useful life; PC=passenger car; LDT=light-duty truck; MDV=medium-duty vehicle; ECS= Emission Control System; STD= Standard; CERT= Certification; LVW=loaded vehicle weight; ALVW=adjusted LVW; LEV=low emission vehicle; TLEV=transitional LEV; ULEV=ultra LEV; SULEV=super ULEV; TWC=3-way catalyst; ADSTWC=adsorbing TWC; WU=warm-up catalyst; OC=oxidizing catalyst; O2S=oxygen sensor; HO2S=heated O2S; AFS/HAFS=air- fuel ratio sensor / heated AFS; EGR=exhaust gas recirculation; AIR=secondary air injection; PAIR=pulsed AIR; MFI= multiport fuel injection; SFI=sequential MFI; TBI=throttle body injection; TC/SC= turbo/super charger; CAC=charge air cooler; OBD (P)/(P)=full/partial on-board diagnostic; DOR=direct ozone reducing; prefix 2=parallel; (2) suffix=series; CNG/LNG= compressed/liquefied natural gas; LPG=liquefied petroleum gas; E85="85%" Ethanol Fuel

2006 MODEL YEAR: VEHICLE MODELS INFORMATION

MAKE	MODEL	EVAPORATIVE FAMILY	ECS NO.	ENGINE SIZE (L)	INTERMEDIATE IN-USE COMPLIANCE (*=N/A or full in-use; A/E=exh./evap. intermediate in-use)		PHASE-IN STD.	OBD II
					EXH	EVAP		
VOLVO	S60 T5	6VVXR0130EV4	1	2.4	A	E	SFTP	Full
VOLVO	S60 R AWD	6VVXR0130EV4	1	2.5	A	E	SFTP	Full
VOLVO	V70 T5	6VVXR0130EV4	1	2.4	A	E	SFTP	Full
VOLVO	V70 R AWD	6VVXR0130EV4	1	2.5	A	E	SFTP	Full
VOLVO	S60 T5	6VVXR0130EV5	1	2.4	A	E	SFTP	Full
VOLVO	S60 R AWD	6VVXR0130EV5	1	2.5	A	E	SFTP	Full
VOLVO	V70 T5	6VVXR0130EV5	1	2.4	A	E	SFTP	Full
VOLVO	V70 R AWD	6VVXR0130EV5	1	2.5	A	E	SFTP	Full



Pursuant to the authority vested in the Air Resources Board by Health and Safety Code (HSC), Div. 26, Part 5, Chap. 2; and pursuant to the authority vested in the undersigned by HSC Sections 39515-39516 and Executive Order G-02-003;

IT IS ORDERED AND RESOLVED: That the following exhaust and evaporative emission control systems produced by the manufacturer are certified as described below. Production vehicles shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	TEST GROUP	VEHICLE TYPE (PC=passenger car; LDT=light-duty truck; MDV=medium-duty vehicle; LVW=loaded vehicle weight; ALVW=adjusted LVW; GVW=gross vehicle weight)	EXHAUST EMISSION STANDARD CATEGORY (LEV=low emission vehicle; TLEV= transitional LEV; ULEV=ultra LEV; SULEV=super ULEV)	EXHAUST & ORVR / EVAPORATIVE USEFUL LIFE (UL) (miles)	FUEL TYPE (CNG/LNG=compressed/ liquefied natural gas; LPG=liquefied petroleum gas)
2006	6VVXB02.5U2T	PC and LDT ≤ 8,500 pounds GVW (PC; LDT 3,751 – 5,750 pounds LVW)	LEV II ULEV	120K / 150K	Gasoline
No.	EVAPORATIVE FAMILY (EVAF)	No.	SPECIAL FEATURES & EMISSION CONTROL SYSTEMS (ECS)	* = not applicable	
1	6VVXR0130EV4	1	TWC, SFI, HO2S, HAFS, TC, CAC, OBD (F)	OC/TWC=oxidizing/3-way cat. ADSTWC=adsorbing TWC WU= warm-up cat. O2S/HO2S=oxygen sensor/heated O2S AFS/HAFS=air-fuel ratio sensor/heated AFS EGR=exhaust gas recirculation AIR/PAIR=secondary air injection/pulsed AIR MFI/SFI= multiport fuel injection/sequential MFI TBI= throttle body injection TC/SC=turbo/super charger CAC=charge air cooler DOR=direct O3 reduction OBD (F) / (P)=full /partial on- board diagnostic prefix 2=parallel (2) suffix=series	
2	6VVXR0130ET1	2			
3	6VVXR0132EV2	3			
4	6VVXR0130EV5	4			
5	6VVXR0130ET2	5			
EVAF No.	ECS No.	ENGINE SIZE (L)	VEHICLE MAKES & MODELS	VEHICLES SUBJECT TO SFTP STANDARDS ARE UNDERLINED	ABBREVIATIONS:
1 & 4	1	2.5		<u>Volvo: (PC) V70 2.5T, V70 2.5T AWD, S60 2.5T, S60 2.5T AWD, S80, S80 AWD</u>	
2 & 5	1	2.5		<u>Volvo: (LDT 3,751 – 5,750 pounds LVW) XC70 AWD, XC90 AWD, XC90</u>	
3	1	2.5		<u>Volvo: (PC) S40 T5, S40 T5 AWD, V50 T5, V50 T5 AWD</u>	

The exhaust and evaporative emission standards (STD) and certification emission levels (CERT) for the listed vehicles are as follows (compliance with the 50 °F testing requirement (for TLEV, LEV, ULEV, SULEV) may have been met based on the manufacturer's submitted compliance plan in lieu of testing). Any debit in the manufacturer's "NMOG Fleet Average" (PC and LDT) or "Vehicle Equivalent Credit" (MDV) compliance plan shall be equalized as required.

NMOG FLEET AVERAGE STD [g/mi]		NMOG @ RAF= * CH4 RAF= *		NMOG or NMHC STD [g/mi]	CH4=methane NMOG=non-CH4 organic gas NMHC=non-CH4 hydrocarbon CO=carbon monoxide NOx=oxides of nitrogen HCHO=formaldehyde PM=particulate matter RAF=reactivity adjustment factor 2/3 D [g/test]=2/3 day diurnal+hot-soak RL [g/mi]=running loss ORVR [g/gallon dispensed]=on-board refueling vapor recovery g=gram mg=milligram mi=mile K=1000 miles F=degrees Fahrenheit SFTP=supplemental federal test procedure											
PC/LDT1	LDT2	NMOG CERT [g/mi]	NMHC CERT [g/mi]		CO [g/mi]		NOx [g/mi]		HCHO [mg/mi]		PM [g/mi]		Hwy NOx [g/mi]			
0.048	0.062				CERT	STD	CERT	STD	CERT	STD	CERT	STD	CERT	STD		
		@ 50K	0.015	*	0.040	0.3	1.7	0.02	0.05	*	8	*	*	0.004	0.07	
		@ UL	0.017	*	0.055	0.3	2.1	0.02	0.07	*	11	*	*	0.004	0.09	
@ 50°F & 4K		0.038	*	0.080	0.3	1.7	0.03	0.05	*	16	*	*	*	*		
CO [g/mi] @ 20°F & 50K	SFTP 1 = @ 4K (SULEV, ULEV, LEV) or 50K (Tier 1, TLEV) SFTP 2 = @ UL (Tier 1, TLEV)		NMHC+NOx [g/mi] (composite)		CO [g/mi] (composite)		NMHC+NOx [g/mi] [US06]		CO [g/mi] [US06]		NMHC+NOx [g/mi] [SC03]		CO [g/mi] [SC03]			
CERT	0.7		CERT	STD	CERT	STD	CERT	STD	CERT	STD	CERT	STD	CERT	STD		
STD	10.0		SFTP 1	*	*	*	*	0.01	0.14	0.3	8.0	0.01	0.20	0.2	2.7	
			SFTP 2	*	*	*	*	*	*	*	*	*	*	*	*	
@ UL	EVAPORATIVE FAMILY 1				EVAPORATIVE FAMILY 2				EVAPORATIVE FAMILY 3				EVAPORATIVE FAMILY 4			
	3-D	2-D	RL	ORVR	3-D	2-D	RL	ORVR	3-D	2-D	RL	ORVR	3-D	2-D	RL	ORVR
CERT	0.44	0.43	0.01	0.08	0.48	0.61	0.01	0.03	0.31	0.32	0.01	0.04	0.33	0.44	0.01	0.06
STD	0.50	0.85	0.05	0.20	0.65	0.85	0.05	0.20	0.50	0.65	0.05	0.20	0.50	0.65	0.05	0.20
@ UL	EVAPORATIVE FAMILY 5				EVAPORATIVE FAMILY 6				EVAPORATIVE FAMILY 7				EVAPORATIVE FAMILY 8			
	3-D	2-D	RL	ORVR	3-D	2-D	RL	ORVR	3-D	2-D	RL	ORVR	3-D	2-D	RL	ORVR
CERT	0.33	0.44	0.01	0.06	*	*	*	*	*	*	*	*	*	*	*	*
STD	0.65	0.85	0.05	0.20	*	*	*	*	*	*	*	*	*	*	*	*

BE IT FURTHER RESOLVED: That for the listed vehicle models, the manufacturer has attested to compliance with Title 13, California Code of Regulations, (13 CCR) Sections 1965 [emission control labels], 1968.2 [on-board diagnostic, full or partial compliance], 2035 et seq. [emission control warranty], 2235 [fuel tank fill pipes and openings] (gasoline and alcohol fueled vehicles only), and "High-Altitude Requirements" and "Inspection and Maintenance Emission Standards" (California Exhaust Emission Standards and Test Procedures for 2001 and Subsequent Model PC, LDT and MDV).

BE IT FURTHER RESOLVED: That at the request of the manufacturer, LDT models in this test group with a GVW over 6,000 pounds are certified to the evaporative emission standards applicable to LDT under 6,000 pounds GVW.

Vehicles certified under this Executive Order shall conform to all applicable California emission regulations. The Bureau of Automotive Repair will be notified by copy of this Executive Order.

This Executive Order hereby supersedes Executive Order A-018-0141 dated May 19, 2005.

Executed at El Monte, California on this 3RD day of November 2005.

Allen Lyons, Chief

Mobile Source Operations Division